

REMARKS

Claims 14-21 and 24-34 are pending in the application with claims 14, 28, and 34 being the independent claims. Claims 14 and 28 are amended. Claims 22 and 23 are cancelled without prejudice to or disclaimer of the subject matter therein. Claim 34 is new newly added. Support for these claim amendments can be found in the specification, claims, and drawings as originally filed. Applicant traverses the rejections.

New Claim

New claim 34 is similar in many ways and includes substantially similar subject matter to previously allowable claim 3, before claim 3 was cancelled. Claim 3 was dependent on claim 1. Accordingly, Applicant respectfully requests that the Examiner consider new claim 34 and pass it to allowance.

Drawings

The drawings are objected to for not showing the subject matter of claims 22 and 23. By this paper, Applicant has cancelled these claims. Applicant reserves the right to add the subject matter of these claims into this application or into a continuing application, along with associated drawings in compliance with PTO requirements if he so chooses at a later time. Applicant respectfully requests that the Examiner withdraw the objection.

Compliance with 35 U.S.C. §102

The Office Action indicated that claims 14-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2003/0045940 to Eberlein et al. ("Eberlein"). Claim 14 is directed to a posterior vertebral support. In particular, claim 14 recites:

14. A posterior vertebral support assembly, comprising:
an interspinous wedge configured to engage with and be inserted
between the spinous processes of two vertebrae, wherein the wedge
includes at least one elastically deformable zone;
two compressive lateral elements disposed on either side of the
wedge in a longitudinal direction, wherein the compressive lateral

elements are deformable between releasing positions and compressive positions; and

two lateral transmission elements disposed between the compressive lateral elements and the wedge, and configured to selectively press against the wedge in the transverse direction near the elastically deformable zone.

The PTO specifies in MPEP §2131 that, in order for a reference to anticipate a claim under §102, the reference must teach each and every element recited in the claim. Eberlein does not teach each and every element of claim 14. For example, Eberlein does not disclose a “posterior vertebral support assembly,” does not disclose an “interspinous wedge,” and does not disclose any device “configured to engage with and be inserted between the spinous processes of two vertebrae.” Accordingly, Eberlein does not properly anticipate claim 14. Applicant respectfully requests that the Examiner withdraw the rejection.

Compliance with 35 U.S.C. §103

Independent Claim 14

The Office Action indicated that claims 14-22, 24, 26, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,440,169 to Elberg et al. (“Elberg”) in view of U.S. Patent No. 5,645,599 to Samani. Applicant respectfully traverses the rejection.

Applicant submits that, in the present case, a *prima facie* case of obviousness has not been established. To establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all the claim limitations. See MPEP § 2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In the present case, the combination of Elberg and Samani does not teach or suggest all the features of claim 14. For example, claim 14 is directed to a posterior vertebral support assembly, that includes “an interspinous wedge configured to engage with and be inserted between the spinous processes of two vertebrae,” and “two compressive lateral elements disposed . . . in a longitudinal direction.”

Figure 1 of the Elberg reference is reproduced below.

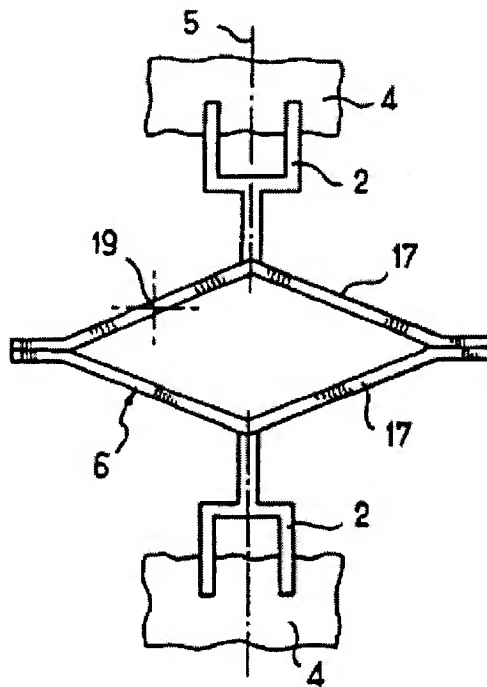
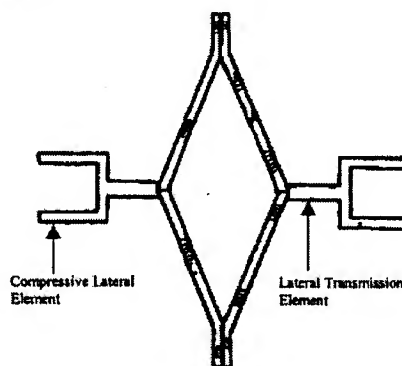


Fig. 1 of Elberg Patent

Elberg discloses a stabilizer with two anchor members (2) adapted to be fixed rigidly to the spinous processes of respective adjacent vertebrae (4). Col. 3, lines 23-25. When considered as disclosed and taught in the Elberg reference, the Elberg device does not include “two compressive lateral elements disposed on either side of the wedge in a longitudinal direction” and does not include the “two lateral transmission elements.” Thus, in its disclosed form, Elberg does not teach or suggest all the features of claim 14.

However, the Office Action disclosed a modified version of the Elberg device, with the spinous processes of the adjacent vertebrae removed, and the device rotated 90 degrees. Below is a figure taken from page 7 of the Office Action.

Figure 2



As modified in Office Action, pg. 7.

By modifying the device disclosed in the Elberg reference, the Office Action suggests that the anchor members 2 are now compressive lateral elements disposed . . . in a longitudinal direction. However, the modified arrangement from the Office Action does not teach or suggest all the features of claim 14. For example, it does not disclose a posterior vertebral support assembly including, an interspinous wedge configured to engage with . . . the spinous processes of two vertebrae. Instead, it discloses two tips, that are not configured to engage with the spinous process of two vertebrae. Further, the Examiner has provided no reason for modifying the Elberg device so that it no longer fits the spinous processes.

The Office Action relies on Samani for a teaching of an interspinous wedge. However, Samani does not cure the deficiencies of the Elberg reference, in either configuration discussed above.

Therefore, because the combination of Elberg and Samani do not teach or suggest all the features recited in claim 14, the claim should be allowable over this combination.

Furthermore, the PTO requires that there “be a reasonable expectation of success to modify or combine references. See MPEP § 2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Here, modifying the Elberg device as proposed in the Office Action would render it unsuitable for its intended purpose, as it would provide no interspinous stabilization. Instead, its unclear what purpose it would have. Therefore, because the combination of Elberg and Samani do not provide a reasonable expectation of success, claim 14 should be allowable over this combination.

Independent Claim 28

The Office Action indicated that claims 28 and 30-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,514,256 to Zucherman et al. (“Zucherman”) in view of U.S. Patent No. 5,496,318 to Howland et al. (“Howland”). Applicant respectfully traverses the rejection.

28. A posterior vertebral support assembly, comprising:
an interspinous wedge configured to be inserted between the spinous processes of two vertebrae, wherein the wedge includes at least one elastically deformable zone;

a circular strap engageable round at least two spinous processes and the wedge, the strap forming a first and a second compressive lateral element disposed on opposing lateral sides of the wedge, the first and second compressive lateral elements being configured to maintain the position of the wedge; and first and second lateral transmission elements disposed respectively between the first compressive lateral element and the wedge and the second compressive lateral element and the wedge, the first and second lateral transmission elements being adapted to press against the wedge in the transverse direction in response to forces applied by the first and second compressive lateral elements.

The combination of Zucherman and Howland does not render claim 28 unpatentable because it does not teach or suggest all the features of claim 28. For example, the combination fails to teach or suggest a posterior vertebral support assembly having lateral transmission elements that are “adapted to press against the wedge in the transverse direction in response to forces applied by the first and second compressive lateral elements,” as required in claim 28.

The Office Action identifies Zucherman’s “screw or other type of fastening mechanism 380” as a teaching of the claimed “lateral transmission elements.” Office Action, pg. 8. It also identifies the Howland belt as the claimed “first and second compressive lateral elements.” Office Action, pg. 8.

But as described further below, the “screw or other type of fastening mechanism 380” is not “adapted to press against the wedge . . . in response to forces applied by the first and second compressive lateral elements,” as required by claim 28.

Zucherman discloses an implant 370 formed of distraction cones 372, 374. It states at col. 7, lines 10-22:

Using *appropriate tool as shown hereinabove*, the distraction cones 372, 374 are urged together. As they are urged together, the cones distract the spinous processes as shown in FIG. 22. Once this has occurred, *an appropriate screw or other type of fastening mechanism 380* can be used to maintain the position of the distraction cones 372, 374.
(Italics added)

The “appropriate tool as shown hereinabove” identified in Zucherman appears to be an implantation tool 120 used with a snap-together fastener in Figs. 14 and 15. Col. 5, lines 62-64. However, the snap-together fastener usable with the tool appears to be incapable of pressing “in response to forces applied by the first and second compressive lateral elements” as required by

claim 28, because after the snap-together fastener is assembled, the fastener's wide-ends and snap-together design would limit lateral pressing in response to forces applied by the Howland belt. In other words, when assembled, the snap-together fastener cannot respond to additional lateral forces. Thus, the snap-together fastener would not meet the "lateral transmission elements" limitation of claim 28.

Zucherman discloses an alternative fastening mechanism as a screw. Col. 7, lines 10-22. One embodiment of the screw is discussed with reference to Figs. 16 and 17 of Zucherman. However, the screw would be incapable of pressing "in response to forces applied by the first and second compressive lateral elements" as required by claim 28, because the thread design would limit lateral pressing in response to forces applied by the Howland belt. In other words, when assembled, the screw cannot respond to lateral forces. Thus, the screw would not meet the "lateral transmission elements" limitation of claim 28.

The combination of Zucherman and Howland does not disclose lateral transmission elements adapted as recited in claim 28. Therefore, the combination does not establish a *prima facie* case of obviousness with respect to claim 28. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection and allow this claim.

Dependent Claims

Claims 15-21 and 24-27 and claims 29-33 respectively depend from claim 14 and claim 28, and also are believed to be distinct from the art of record, for example for the same reasons discussed above with respect to claims 14 and 28 respectively. Further, Applicant notes that the proposed modification of the Eberlein device would limit the device's applicability to a number of dependent claims.

Conclusion

For at least the reasons set forth above, Applicant submits that the pending claims 14-21 and 24-34 are in condition for allowance. Accordingly, Applicant respectfully requests that the Examiner withdraw the outstanding objections and rejections and issue a formal notice of allowance.

The Office Action contains characterizations of the claims and the related art to which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

Please grant any extension of time required to enter this response and charge any additional required fees to our Deposit Account No. 08-1394.

Respectfully submitted,



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